

33. A method of changing data stored at a receiving unit to match data stored at a source unit, comprising:

determining multiple first keys corresponding to groups of data stored at a first unit;

5 determining a second key corresponding to a group of data stored at a second unit;

comparing the second key with the multiple first keys;

designating which of the first unit and the second unit are the source unit and the receiving unit; and

10 transmitting from the designated source unit to the designated receiving unit data corresponding to the second key if the second key matches none of the multiple first keys, and leaving unchanged in the designated receiving unit the data corresponding to the second key if the second key matches one of the multiple first keys.

15 34. The method of claim 33 wherein the comparing the second key with the multiple first keys takes place in the second unit, and further comprising transmitting the multiple first keys from the first unit to the second unit.

35. The method of claim 34 wherein the first unit is the designated receiving unit.

20 36. The method of claim 33, further comprising:  
successively determining different second keys corresponding to different groups of data stored at the second unit;

successively comparing each of the different second keys with the multiple first keys; and

25 transmitting from the designated source unit to the designated receiving unit data corresponding to each of the different second keys that matched none of the multiple first keys.

37. A method of transmitting data from a source computer to a receiving computer, the source and receiving computers being connected through a computer data interface, comprising:

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dividing a first file into multiple data blocks and associating each data block of the multiple data blocks with a first key value determined in accordance with a key defining method by the data in the data block;

5 identifying multiple data blocks from a second file and determining second key values in accordance with the key defining method;

using the first and second key values to compare data blocks from the first file and from the second file;

designating which of the first file and the second file are located at the source computer and at the receiving computer; and

10 for instances in which a match is found between a data block from the first file and a data block from the second file, leaving unchanged the data block stored in the designated receiving computer.

15 38. The method of claim 37 wherein a selected data block from the first file is identified and a selected first key from the selected data block is determined and, for instances in which no match is found between a data block from the first file and a data block from the second file, the method further comprising:

transmitting to the designated receiving computer a subset of the selected data block from the first file, the subset including less than all of the information in the selected data block; and

20 identifying from the first file a subsequent data block comprising the selected data block less the subset transmitted to the designated receiving computer, and additional data from the first file.

25 39. The method of claim 37 wherein each of the multiple data blocks from the first and second files includes multiple bytes of data of which each byte has a value, and wherein at least a portion of the key value for a data block from any one of the first and second files is computed by adding the value of each byte of data in the data block to produce a total for all of the bytes in the data block.

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